IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES
APPEAL BRIEF FOR THE APPELLANTS
Ex parte Arcaria

Applicant: Angelo S. Arcaria)
)
Serial No. 10/020,967) Art Unit: 2636
)
Filed: December 19, 2001) Examiner: D. Previl

For: PROGRAMMABLE ELECTRONIC CIRCUIT

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith are three copies (3) of an Appeal Brief and a check for the official fee for the Appeal Brief, in the amount of Five Hundred Dollars ($500.00). The brief was due on January 8, 2005. A petition for a three month extension of time along with the requisite fee of One Thousand and Twenty Dollars ($1,020.00) is submitted herewith extending the time for response to April 8, 2005. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036.

Respectfully submitted,

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BRIEF ON APPEAL

I. INTRODUCTION

This is an appeal from the final Office Action dated November 19, 2004. A Notice of Appeal was filed on November 8, 2004. Submitted herewith is a petition for a three month extension of time along with the requisite fee extending the time for response to April 8, 2005.

II. REAL PARTY IN INTEREST

The Real Party in Interest in the present application is Edwards Systems Technology, Inc. by way of an assignment.

III RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to the Appellant, Appellant's representatives or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

IV. STATUS OF THE CLAIMS

Claims 1-26 are pending in the application. Claims 1-26 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 1-18 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application No. 2003/0003950 to Kroll *et al.* (hereinafter "Kroll"). Claims 19-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kroll in view of U.S. Patent No. 4,110,750 to Heyning *et al.* (hereinafter "Heyning"). Claims 1, 11 and 14 are independent claims upon which claims 2-10, 12-13 and 15-26 ultimately depend. The claims on appeal, claims 1-26, are set forth in the attached Appendix.

V. STATUS OF THE AMENDMENTS

Claims 1-26 were finally rejected in the Office Action mailed June 9, 2004. In response, an Amendment was submitted on September 9, 2004 presenting arguments that traversed the final rejections without proposing claim amendments or cancellations. A Notice of Appeal was filed on November 8, 2004. An Advisory Action was mailed on November 18, 2004 giving notice that the application is not in condition for allowance because the claims are not defined over the prior arts of record and the Applicant's argument are not persuasive to put the application in condition for allowance.

VI. SUMMARY OF THE INVENTION

A. Related Art Problems Overcome by the Invention

In the conventional art, chimes or signaling devices have been widely used in industrial manufacturing environments to broadcast information to employees. However, chimes

generated from known chime devices may become inconsistent from one device to another because of unstable electrical components in the circuitry responsible for generating the chime. This instability can be attributed to variation in the ambient temperature surrounding the chime circuitry because the output voltages of some circuit components, such as integrated circuits, transistor, and diodes, vary relative to temperature.

In order to alleviate the problems of the prior art, the invention of the present application provides a tone-generating circuitry that provides a substantially continuous output that is substantially unaffected by temperature variations.

B. Object of the invention

Embodiments of the present invention generally provide for an improved chime device having tone-generating circuitry that is not affected by temperature variations.

C. The claimed invention

1. Independent Claim 1

The apparatus of independent claim 1 is described in the specification, *inter alia*, at paragraphs [0017-0020], [0037-0039] and FIG. 1.

Independent claim 1 includes an electronic device 10 comprising a CPU 12 and a signal-generating circuit 14, wherein the signal-generating circuitry 14 comprises RC circuitry 34 having a first capacitor 18 and a second capacitor 22, the first and second capacitor 18, 22 are detachably coupled (see for example paragraphs [0037-0039]) to signal-generating circuit 14 and are switched into the signal generating circuit 14 by the CPU 12 to extend the length of an output signal as desired by the user.

2. Dependent claims 2-10, 21, 22

Dependent claim 2 is dependent on claim 1 and further defines the electronic device 10, wherein the CPU 12 outputs a voltage square wave.

Dependent claim 3 is dependent on claim 2 and further defines the electronic device 10, wherein the signal-generating circuitry 14 further comprises a unity follower circuit 78 that buffers the voltage square wave and generates a buffered voltage (see for example paragraph [0029]).

Dependent claim 4 is dependent on claim 3 and further defines the electronic device 10, wherein the signal-generating circuitry 14 further comprises an adder circuit 56 that receives a buffered voltage. (see for example paragraphs [0021] and [0034-0035]).

Dependent claim 5 is dependent on claim 4 and further defines the electronic device 10, wherein the CPU 12 outputs a dc voltage to the RC circuitry 34.

Dependent claim 6 is dependent on claim 5 and further defines the electronic device 10, wherein the signal-generating circuitry 14 further comprises a first voltage divider circuit 38 that establishes a charge voltage on the first capacitor 18 when it is switched into the signal-generating circuitry 14 and on the second capacitor 22 when it is switched into the signal-generating circuitry 14.

Dependent claim 7 is dependent on claim 4 and further defines the electronic device 10, wherein the charge voltage is input to a first terminal 40 of the adder circuit 56.

Dependent claim 8 is dependent on claim 7 and further defines the electronic device 10, further comprising a diode 50, wherein the diode 50 is in a feedback loop of the adder circuit 56.

Dependent claim 9 is dependent on claim 8 and further defines the electronic device 10, wherein the diode 50 allows the feedback loop to conduct current when the buffered voltage is less than the charge voltage (see for example paragraphs [0034-0035]).

Dependent claim 10 is dependent on claim 8 and further defines the electronic device 10, wherein the diode 50 does not allow feedback loop current when the buffered voltage is greater than the charge voltage (see for example paragraphs [0034-0035]).

Dependent claim 21 is dependent on claim 1 and further defines the electronic device 10, wherein the signal-generating circuit 14 is substantially not affected by an ambient temperature surround the signal generating circuit 14.

Dependent claim 22 is dependent on claim 21 and further defines the electronic device 10, wherein the signal circuit 14 does not include transistors.

3. Independent Claim 11

Independent claim 11 includes a method for programming a chime device 10, comprising the steps of generating a voltage square wave at a node of signal-generating circuitry 14, generating a charge voltage signal from charging a detachable first capacitor 18, if needed, switching a detachable second capacitor 22 into the signal-generating circuit 14 by a CPU 12 to extend the length of charge voltage, inputting the charge voltage to an input of the adder circuit 56, outputting to the node the charge voltage signal during the time when a voltage of the voltage square is lower than the charge voltage, and outputting the voltage of the square wave when the voltage of the voltage square wave is greater than the charge voltage (see for example paragraphs [0029-0034]).

4. Dependent Claims 12-13, 23, 24

Dependent claim 12 is dependent on claim 11 and further comprises the step of generating the voltage square wave from buffer circuitry 78.

Dependent claim 12 is dependent on claim 11 and further comprises the step of utilizing the voltage divider circuitry 38, 82 to establish the charge voltage.

Dependant claim 23 is dependant on claim 11 and further defines the method, wherein the signal-generating circuit 14 is substantially not affected by an ambient temperature surround the signal generating circuit 14.

Dependant claim 24 is dependant on claim 23 and further defines the method, wherein the signal circuit 14 does not include transistors.

5. Independent Claim 14

Independent claim 14 is a programmable electronic apparatus 10, comprising means for generating a voltage square wave 12 at a node of a signal-generating circuitry 14, means for generating a charge voltage signal 12 from charging a detachable first capacitor 18, in the signal-generating circuitry 14, if needed, means for switching 90 a detachable second capacitor 22 into the signal-generating circuit 14 by the CPU 12 to extend the charge voltage signal, means for inputting 34 the charge voltage signal to an input of the adder circuit 56, means for outputting 50 an output signal to the node that is the charge voltage signal during the time when a voltage of the voltage square wave is lower the charge voltage, means for outputting 50 an output signal that is the voltage of the voltage square wave to the node when the voltage of the voltage of the square wave is greater than the charge voltage signal (see for example paragraphs [0017-0020] and [0037-0039]).

6. Dependent Claims 15-20, 25, 26

Dependent claim 15 is dependent on claim 14 and further defines the apparatus 10, wherein the means for generating a voltage square is a buffer 78.

Dependent claim 16 is dependent on claim 14 and further defines the apparatus 10, wherein the means for generating the charge voltage signal is a dc voltage source.

Dependent claim 17 is dependent on claim 14 and further defines the apparatus, 10 wherein the means for inputting the charge voltage signal to an input of the adder circuit 56 is RC circuitry 34.

Dependent claim 18 is dependent on claim 14 and further defines the apparatus 10, wherein the means for outputting to the node the charge voltage

Dependent claim 19 is dependent on claim 14 and further defines the apparatus 10, wherein the electronic apparatus is a chime device.

Dependent claim 20 is dependent on claim 14 and further defines the apparatus 10, wherein the output signal is a chime.

Dependent claim 25 is dependent on claim 14 and further defines the apparatus 10, wherein the signal-generating circuit 14 is substantially not affected by an ambient temperature surround the signal generating circuit 14.

Dependent claim 26 is dependent on claim 14 and further defines the apparatus 10, wherein the signal circuit 14 does not include transistors.

VII. ISSUES

A. Whether claims 1-26 comply with the enablement requirement of 35 U.S.C. 112, first paragraph.

B. Whether claims 1-18 are anticipated by Kroll under 35 U.S.C. §102(e).

C. Whether claims 19-26 are unpatentable over Kroll in view of Heyning under 35 U.S.C. §103(a).

VIII. GROUPING OF CLAIMS

Each claim of this patent application is separately patentable, and upon issuance of a patent, will be entitled to a separate presumption of validity under 35 U.S.C. §282.

IX. APPELLANTS ARGUMENTS

A. CLAIM REJECTIONS – 35 U.S.C. § 112

The Examiner rejected claims 1-26 were under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Office Action stated that claims 1, 11, and 14 contain the limitation "the first and second capacitor are detachably coupled." The Office Action stated that this was subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant respectfully traversed this rejection. At the very least, paragraph 38 of the specification provides support for the claimed phrase "detachably coupled." Paragraph 38 details altering the length of the chime output by switching in or switching out another capacitor. Switching a capacitor in and out of the circuit is the same or equivalent are being detachably coupled to the circuit. To switch in a capacitor into the circuit would be equivalent to coupling it

to the circuit. Therefore, being able to switch a capacitor in and out of the circuit is equivalent to being "detachably coupled."

In view of the foregoing arguments, Applicant respectfully requests that the rejection under 35 U.S.C. § 112, ¶ 1, as to claims 1-26, be removed.

B. CLAIM REJECTIONS – 35 U.S.C. § 102(e)

Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent Published Application No. 2003/0003950 to Kroll *et al.* (hereinafter referred to as "Kroll"). In light of the following remarks, Applicant respectfully submits that these claims are allowable.

Initially, Applicant notes that it is axiomatic that to qualify as an anticipation under Section 102, the cited reference must "bear within its four corners adequate directions for the practice of the patent invalidated." (See, for example, Dewey & Almay Chemical Co. v. Mimex Co., Inc., 52 U.S.P.Q. 138 (2nd Cir. 1942)). Applicant respectfully submits that Kroll embodies no such directions.

Applicant notes that Kroll discloses a self defense cellular telephone. Kroll discloses incorporating a cell phone with a personal defense system such as a stun gun. Essentially, Kroll teaches an economical disposable safety cellular telephone.

The Office Action stated that Kroll discloses an electronic device (cellular telephone) (abstract) comprising: a CPU (audio controller 60); a signal generating circuit 100, wherein the signal-generating circuit 100 comprises RC circuit 48, 52, 54, 50, 56, 58 having a first a first capacitor 48 and a second capacitor 50, the first and second capacitor are detachably coupled to

signal generating circuit 100 and are switched into the signal generating circuit 100 by the CPU (audio controller 60) to extend the length of an output signal (fig. 4, page 2, ref. 0037).

The present invention is very specific in that it claims an electronic device that includes a CPU and a signal-generating circuit. The circuitry includes RC circuitry having a first capacitor and a second capacitor, which are detachably coupled (switchable) to a signal-generating circuit and are switched into the signal generating circuit by the CPU to extend the length of an output signal.

As noted previously, a particular problem with the prior art is that, in a number of locations, the ambient temperature can cause audio circuits to produce a chime that is non-continuous in nature. In effect, it is turning on and off. The present invention overcomes this deficiency by switching in a second capacitor in combination with non-temperature sensitive devices. As a result, the voltage to the tone generator is not allowed to drop to such a level that non-continuous chiming is permitted to occur. Additionally, the two capacitors allow one to extend the duration of the chime to a user-defined limitation. None of these claimed features are in the disclosed in Kroll.

The citations to Kroll in the Office Action are primarily to paragraph [0037]. Paragraph [0037] of Kroll discloses a microphone 46 that is coupled capacitors 48 and 50, resistors 52, 54, 56 and 58 into an audio controller 60. However, at no point in paragraph [0037], or anywhere else in Kroll, is there any disclosure of switching (detachably coupling) in the capacitors in order to increase the length of the output signal as is claimed in each of the independent claims, 1, 11 and 14, in the present application.

In light of the above arguments, Applicant respectfully requests that the rejection as to claims 1, 11 and 14 under 35 U.S.C. 102(e) be removed as the cited references do not disclose all

the elements required to support the rejection. Claims 2-10, 12, 13 and 15-26, directly or indirectly, depend from allowable independent claims 1, 11 and 14. As such, claims 2-10, 12, 13 and 15-26 are allowable as well. Therefore, Applicant respectfully requests that the rejection to these claims be removed as well.

C. CLAIM REJECTIONS – 35 U.S.C. § 103(a)

The Examiner rejected claims 19-26 under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 2003/0003950 to Kroll in view of United States Patent No. 4,110,750 to Heyning *et al.* (hereinafter referred to as "Heyning").

The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. *MPEP §2142.* To establish a prima facie case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, to modify the references or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art must teach all the claim limitations. *MPEP §2142*

Applicant respectfully notes that as recently as January 2002 the Federal Circuit rejected the argument that an assertion of obviousness can be merely based on a generalized notion that a particular process is obvious, but affirmatively stated that a conclusion of obviousness must be supported by documented evidence, and that such documented evidence must include "some motivation, suggestion, or teaching of the desirability of making the **specific combination** that was made by the applicant" {bolded emphasis added}. *In re Lee*, Case No. 00-1158 (Fed. Cir. 2002); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). Conclusory statements, such as those provided by the Office Action in the present circumstances, do not fulfill the obligation of the Patent Office to provide the required specific motivation, and

deficiencies of the cited references cannot be remedied by general conclusions. *In re Lee*, at pp. 8-9; In re Zurko, 258 F.3d at 1385, 59 USPQ2d at 1697.

In light of the above arguments regarding Kroll, the cited references do not teach or suggest all the elements to support a finding of obviousness. Therefore, independent claims 1, 11 and 14 are allowable. Claims 19-26, directly or indirectly, depend from claims 1, 11 and 14. As such, claims 19-26 are allowable as well. Applicant respectfully requests the rejection to these claims be removed as well.

X. CONCLUSION

For all of the above-noted reasons, it is strongly contended that certain, clear and important distinctions exist between the present invention as recited in claims 1-26 and the cited references as provided in the final Office Action. This final rejection being in error, therefore, it is respectfully requested that this Honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case, and indicate the allowability of claims 1-26.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036 with reference to Attorney Matter No. 87321.1500.

Respectfully submitted,

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APPENDIX 1

1. An electronic device comprising:

a CPU; and

a signal-generating circuit, wherein the signal-generating circuitry comprises RC circuitry having a first capacitor and a second capacitor, the first and second capacitor are detachably coupled to signal-generating circuit 14and are switched into the signal generating circuit by the CPU to extend the length of an output signal.

2. The electronic device of claim 1, wherein the CPU outputs a voltage square wave.

3. The electronic device of claim 2, wherein the signal-generating circuitry further comprises a unity follower circuit that buffers the voltage square wave and generates a buffered voltage.

4. The electronic device of claim 3, wherein the signal-generating circuitry further comprises an adder circuit that receives a buffered voltage

5. The electronic device of claim 4, wherein the CPU outputs a dc voltage to the RC circuitry.

6. The electronic device of claim 5, wherein the signal-generating circuitry further comprises a first voltage divider circuit that establishes a charge voltage on the first capacitor when it is switched into the signal-generating circuitry and on the second capacitor when it is switched into the signal-generating circuitry.

7. The electronic device of claim 4, wherein the charge voltage is input to a first terminal of the adder circuit.

8. The electronic device of claim 7, further comprising a diode, wherein the diode is in a feedback loop of the adder circuit.

9. The electronic device of claim 8, wherein the diode allows the feedback loop to conduct current when the buffered voltage is less than the charge voltage.

10. The electronic device of claim 8, wherein the diode does not allow feedback loop current when the buffered voltage is greater then the charge voltage.

11. A method for programming a chime device, comprising:

generating a voltage square wave at a node of signal-generating circuitry;

generating a charge voltage signal from ~~the~~ charging a detachable first capacitor~~,~~;

if needed, switching a detachable second capacitor into the signal generating circuit by a CPU to extend the length of charge voltage;

inputting the charge voltage to an input of the adder circuit;

outputting to the node the charge voltage signal during the time when a voltage of the voltage square is lower than the charge voltage; and

outputting the voltage of the square wave when the voltage of the voltage square wave is greater then the charge voltage.

12. The method of claim 11, further comprising:

generating the voltage square wave from buffer circuitry.

13. The method of claim 11, further comprising:

utilizing voltage divider circuitry to establish the charge voltage.

14. A programmable electronic apparatus, comprising:

means for generating a voltage square wave at a node of a signal-generating circuitry;

means for generating a charge voltage signal from charging a detachable first capacitor, in the signal-generating circuitry;

if needed, means for switching a detachable second capacitor into the signal generating circuit by the CPU to extend the charge voltage signal;

means for inputting the charge voltage signal to an input of the adder circuit;

means for outputting an output signal to the node that is the charge voltage signal during the time when a voltage of the voltage square wave is lower the charge voltage;

means for outputting an output signal that is the voltage of the voltage square wave to the node when the voltage of the voltage of the square wave is greater than the charge voltage signal.

15. The programmable electronic apparatus of claim 14, wherein the means for generating a voltage square wave is a buffer.

16. The programmable electronic apparatus of claim 14, wherein the means for generating the charge voltage signal is a dc voltage source.

17. The programmable electronic circuit apparatus of claim 14, wherein the means for inputting the charge voltage signal to an input of the adder circuit is RC circuitry.

18. The programmable electronic apparatus of claim 14, wherein the means for outputting to the node the charge voltage

19. The programmable electronic apparatus of claim 14, wherein the electronic apparatus is a chime device.

20. The programmable electronic apparatus of claim 14, wherein the output signal is a chime.

21. The electronic device of claim 1, wherein the signal generating circuit is substantially not affected by an ambient temperature surround the signal generating circuit.

22. The electronic device of claim 21, wherein the signal circuit does not include transistors.

23. The method of claim 11, wherein the signal generating circuit is substantially not affected by an ambient temperature surround the signal generating circuit.

24. The method of claim 23, wherein the signal circuit does not include transistors.

25. The programmable electronic apparatus of claim 14, wherein the signal generating circuit is substantially not affected by an ambient temperature surround the signal generating circuit.

26. The programmable electronic apparatus of claim 14, wherein the signal circuit does not include transistors.